1967 Soybean Variety Performance In Illinois

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CONTENTS

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Cooperative Extension Work, University of Illinois, College of Agriculture, and the U.S. Department of Agriculture cooperating. JOHN B. CLAAR, *Director*.
Acts approved by Congress May 8 and June 30, 1914.

In 1967, Illinois farmers established themselves as the national champions in total soybean production. The average yield in Illinois was 31 bushels per acre, but research with new soybean varieties and modernized cultural and fertility practices indicate that soybean yields could be averaging 50 bushels per acre. One means of increasing soybean yields is by the use of better varieties.

When selecting a new variety, you naturally want to know its yield record. You also should want to know a great deal more. For example, what is the maturity date and what is its resistance to lodging? Preferably, this information should originate from variety test plots planted in the same area where you farm.

This circular brings together the latest information on the performance of soybean varieties in Illinois. It contains yields and other important information from tests by the U.S. Regional Soybean Laboratory at Urbana, as well as yields from 41 county demonstration test plots. For a more complete description of varieties, see University of Illinois Cooperative Extension Service Circular 976, "Illinois Agronomy Handbook, 1968."

Maturity Groups

Soybeans are classified into groups, according to their relative time of maturity. Group I varieties mature earlier than those in groups II, III, IV, and V. The larger the group number, the later the date of maturity. Varieties in Group I are nearly full season in northern Illinois, but they are too early for good growth and yield in southern Illinois. Group V varieties would be full season in southern Illinois, but would not mature in northern Illinois.

New Varieties

Hark (Group I) was released in 1967 and is adapted to northern Illinois. In northern Illinois tests, its yields have been as high as those of most Group II varieties but lower than those of Amsoy. Hark is relatively tall for an early variety. It tends to shatter when grown in central or southern Illinois, where it ripens early while the weather is still warm. Hark is similar to Wayne in its sensitivity to iron-deficiency chlorosis during early growth stages when planted on soils high in pH (7 +).

Disoy (Group I), **Magna** (Group II), and **Prize** (Group II) are large-seeded varieties released in 1967. They are best suited to specialty-market use (food and food products), because of their larger size and lower oil content. They should be grown under a contract with a guaranteed market assured.

Custer (Group IV) is the second variety released that is resistant to the cyst nematode and the first one adapted to Illinois. It was released by the Missouri Agricultural Experiment Station and the U.S. Department of Agriculture in 1967. It matures about 7 days later than Clark, grows 2 to 5 inches taller and is more susceptible to lodging. Custer is resistant to phytophthora rot and bacterial pustule. Its use should be confined to fields infested with the cyst nematode. In the absence of cyst nematodes, it is not quite equal to other Group IV varieties in yield. Custer was developed from Scott, and performance has been similar.

Dare (Group V) is a newly released variety that is being increased by certified seed growers in Missouri, Oklahoma, Maryland, Virginia, and North Carolina. It has been tested two years in the southern tip of Illinois and has performed very well. It is suggested for growing in that area whenever a late variety is desired, because it has outyielded Hill, Ogden, and Lee and because it often produces a higher seed quality than the earlier Group IV varieties.

Table 1. — Yields From Uniform Soybean Tests in Illinois, 1967

Maturity group and variety	De-Kalb	Pon-tiac	Mason City	Urbana	Girard	Edge-wood	Tren-ton	Eldo-rado	Carbon-dale	Miller City
					(bushels per acre)					
Group O										
Grant	46.8	....	....	....	....	....	....	....	....	....
Traverse	47.2	....	....	....	....	....	....	....	....	....
Group I										
Chippewa 64	47.2	51.3	35.2	42.3	....	....	....	....	....	....
Disoy	46.1	50.2	35.0	40.4	....	....	....	....	....	....
Hark	50.9	54.5	37.8	44.5	....	....	....	....	....	....
A-100	50.9	51.5	39.9	45.6	....	....	....	....	....	....
Group II										
Harosoy	48.9	48.7	41.4	44.6	50.0	40.6	50.0	....	36.8	....
Harosoy 63	49.7	51.2	41.2	44.6	49.7	45.2	49.7	43.9	35.6	....
Lindarin 63	48.3	47.9	42.2	40.6	48.5	52.5	48.5	....	41.8	....
Magna	43.2	46.1	35.9	41.4	45.3	....	....	....	....	....
Prize	44.8	46.2	40.8	42.8	43.7	....	....	....	....	....
Amsoy	53.9	50.5	46.8	46.8	52.6	43.8	52.5	45.4	49.0	....
Group III										
Kanrich	36.7	42.9	36.0	38.7	34.6	....	....	....	....	....
Shelby	....	....	40.5	46.7	37.1	41.1	43.6	42.4	40.7	....
Wayne	47.6	52.4	44.8	46.3	46.6	50.4	47.1	50.7	48.1	35.0
Adelphia	....	....	39.0	44.2	39.5	41.0	46.4	48.2	49.1	....
Group IV										
Clark 63	....	....	36.5	42.6	37.4	38.7	45.8	43.3	44.3	36.1
Kent	....	....	....	43.9	44.9	51.5	49.5	45.1	46.6	42.6
Custer	....	....	....	36.2	32.7	36.2	37.9	43.9	39.7	39.6
Delmar	....	....	....	....	....	....	44.3	48.3	39.7	40.5
Group V										
Hill	....	....	....	....	....	....	....	41.7	41.9	33.2
Dare	....	....	....	....	....	....	....	42.5	40.9	....

Table 2. — Yields at Eight Test Locations, Average of Six Years (1962-1967)

Maturity group and variety	DeKalb	Pontiac	Urbana	Girard	Edgewood	Eldorado	Carbondale	Miller City
				(bushels per acre)				
Group I								
Chippewa 64	43.1	40.4	38.4	....	....	....	....	....
Hark	47.3	42.1	44.2	....	....	....	....	....
A-100	45.9	43.2	42.6	....	....	....	....	....
Group II								
Harosoy	46.6	42.5	44.4	41.5	34.1	....	30.4	....
Harosoy 63	45.8	41.7	43.5	39.5	35.1	....	30.4	....
Lindarin 63	43.2	40.2	41.7	41.3	36.3	....	31.0	....
Amsoy	49.6	44.5	47.7	45.0	36.4	47.1	33.8	....
Group III								
Shelby	....	....	44.7	41.2	35.3	45.8	33.8	....
Wayne	....	....	47.8	47.2	42.3	52.0	36.2	43.2
Group IV								
Clark 63	....	....	44.6	42.0	37.2	47.7	34.5	41.2
Kent	....	....	46.9	43.0	37.5	50.8	37.5	44.4
Delmar	....	....	....	....	....	45.0	34.2	41.8

Table 3. — Maturity Dates at Four Test Locations, Average of Six Years (1962-1967)

Maturity group and variety	DeKalb	Urbana	Eldorado	Miller City
Group I				
Chippewa 64	9–13	8–31	....	....
Hark	9–18	9–4	....	....
A-100	9–21	9–5	....	....
Group II				
Harosoy	9–24	9–6	....	....
Harosoy 63	9–23	9–6	....	....
Lindarin 63	9–24	9–7	....	....
Amsoy	9–27	9–9	9–3	....
Group III				
Shelby	....	9–19	9–11	....
Wayne	....	9–21	9–12	9–11[a]
Group IV				
Clark 63	....	9–29	9–23	9–19
Kent	....	10–6	10–2	9–26
Delmar	....	....	10–6	9–29
Group V				
Hill	....	....	....	10–8
Average planting date	5–18	5–16	5–26	5–25

[a] Estimate based on five years of data.

Table 4. — Performance of Varieties in Tests at Urbana — Average of Six Years (1962-1967)

Maturity group and variety	Lodging	Plant height	Seed quality	Seeds per pound	Seed content	
					Protein	Oil
Group I	(score[a])	(inches)	(score[b])	(number)	(perct.)	(perct.)
Chippewa	1.4	34	1.9	3,170	40.4	21.6
Hark	1.7	35	1.4	3,110	39.9	21.8
A-100	1.7	32	1.9	2,670	39.8	22.2
Group II						
Harosoy	2.5	40	1.9	2,800	40.0	21.5
Harosoy 63	2.6	41	1.9	2,770	40.1	21.7
Lindarin 63	2.1	36	1.8	2,960	40.1	21.4
Amsoy	2.0	40	2.1	2,890	38.4	22.6
Group III						
Shelby	2.2	44	1.8	2,910	39.9	21.4
Wayne	2.0	43	2.2	2,590	40.9	21.5
Group IV						
Clark 63	2.0	43	1.5	2,950	39.7	21.2
Kent	1.6	42	1.9	2,590	39.4	21.6

[a] Lodging score: 1 = erect; 5 = prostrate.
[b] Seed-quality score: 1 = excellent; 5 = very poor (wrinkled, shriveled, green, moldy, imperfect seed coat, or other defects).

Cooperators With the U.S. Regional Soybean Laboratory

R. R. Bell, Northern Illinois Agronomy Research Center.....DeKalb
Donald Alltop .....Pontiac
Arnold Matson, Soybean Research Foundation.....Mason City
M. G. Oldham, Illinois Agricultural Experiment Station.....Urbana
Lloyd Brothers .....Girard
John Wilson .....Edgewood
Fred Bergmann .....Trenton
Marshall Grisham .....Eldorado
D. R. Browning, Southern Illinois University.....Carbondale
Malcolm Patton.....Miller City

Table 5. — Soybean Variety Yields, County Demonstrations, 1967: NORTHERN ILLINOIS

Maturity group	Variety	County										Average
		Boone	Cook	Du-Page	Grundy	Henry	Kanka-kee	Lake	Stark	Stephen-son	White-side	Winne-bago	
		(bushels per acre)											
I	Chippewa 64	34	31	35	32	31	34	23	..	40	26	36	32.2
	Hark	34	30	42	40	39	40	24	44	43	34	34	36.7
	Bombay	34	33	40	37	34	32	28	37	44	32	36	35.2
	A-100	33	33	34	36	27	34	23	42	33	32	34	32.8
II	Harosoy 63	32	33	39	36	34	36	28	32	42	37	40	35.4
	Lindarin 63	34	29	32	34	37	36	28	44	38	37	38	35.2
	Amsoy	32	34	38	34	44	36	25	44	58	39	36	38.2
	Hawkeye 63	35	35	38	34	34	32	26	42	36	38	38	35.3
III	Kanrich	..	35	34	30	31	..	21	41	36	32	20	31.1
	Wayne	..	38	46	41	45	45	30	52	64	40	41	44.2

CENTRAL ILLINOIS

Maturity group	Variety	County										
		Cass	Coles	Cumber-land	Doug-las	Hender-son	Iro-quois	Knox	Living-ston	Macon	Mason	Menard
I	Chippewa 64	..	..	..	..	..	..	50	..	..	..	..
	Hark	42	22	29	35	49	43	57	42	43	45	41
	Bombay	35	..	..	..	36	..	46	34	..	42	33
	A-100	40	26	..	37	47	..	52	43	..	44	34
II	Harosoy 63	40	26	29	39	42	46	50	40	44	46	37
	Lindarin 63	43	23	..	39	41	..	53	40	..	43	37
	Amsoy	49	23	31	41	50	49	53	45	50	50	42
	Hawkeye 63	41	21	27	38	39	38	48	43	44	39	38
III	Kanrich	38	18	31	35	39	31	47	36	43	42	37
	Wayne	46	30	38	43	49	44	56	42	49	48	43
	Adelphia	41	25	31	38	43	37	..	39	43	44	42
IV	Clark 63	40	25	35	39	43	..	..	42	43	42	36
	Bellatti L263	41	24	34	42	38	..	..	40	44	42	32

Maturity group	Variety	County											Average
		Mc-Lean	Mont-gomery	Mor-gan	Moul-trie	Peoria	Pike	Sanga-mon	Scott	Shelby	War-ren	Wood-ford	
I	Chippewa 64	..	..	..	..	26	..	..	..	..	36	32	36.0
	Hark	42	40	40	44	28	52	38	41	41	42	37	40.6
	Bombay	..	40	..	..	26	48	..	..	..	37	34	37.4
	A-100	..	38	39	46	30	28	36	39	47	37	34	38.7
II	Harosoy 63	42	42	42	44	27	48	40	42	43	40	36	40.2
	Lindarin 63	..	43	44	44	26	40	40	41	53	39	40	40.5
	Amsoy	40	48	44	48	31	39	42	41	41	43	38	42.6
	Hawkeye 63	38	41	39	42	28	48	34	40	48	40	31	38.4
III	Kanrich	38	36	30	38	23	24	24	30	43	38	26	34.0
	Wayne	46	49	49	47	34	54	36	45	52	48	37	44.8
	Adelphia	50	45	44	45	32	39	48	45	..	..	..	40.6
IV	Clark 63	40	45	42	44	..	52	42	43	..	..	..	40.8
	Bellatti L263	47	42	42	46	33	..	34	43	..	..	..	38.9

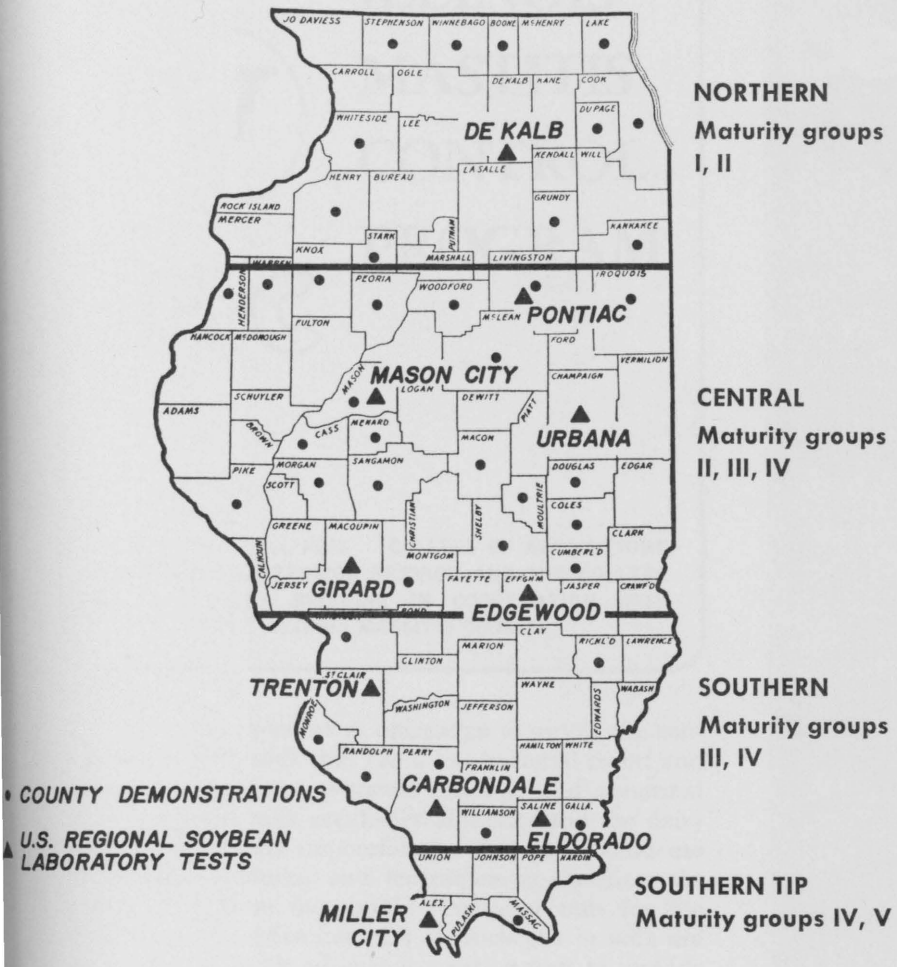
SOUTHERN ILLINOIS

Maturity group	Variety	County								Average
		Gal-latin	Madi-son	Mas-sac	Mon-roe	Perry	Ran-dolph	Rich-land	William-son	
II	Harosoy 63	..	27	..	40	..	..	..	..	33.5
	Amsoy	28	26	34	41	25	16	35	33	29.8
	Hawkeye 63	..	35	..	34	..	..	..	..	34.5
III	Wayne	37	37	41	43	38	25	35	39	36.9
	Adelphia	37	36	49	44	43	21	30	31	36.4
IV	Clark	..	38	39	38	32	26	33	38	34.9
	Clark 63	35	36	41	38	29	19	31	36	33.1
	Bellatti L263	33	33	42	39	34	23	32	39	34.4
	Custer	41	39	40	18	24	27	..	29	31.1
	Kent	48	48	41	17	36	20	..	32	34.6
	Delmar	46	..	43	17	31	25	..	38	33.3
V	Hill	33	..	..	..	34	21	..	34	30.5
	Dare	36	..	..	..	40	22	..	42	35.0

County Demonstrations, Locations and Cooperators

County	*Extension Adviser*	*Cooperator*
Boone	W. E. Reynolds	Lloyd Carmichael
Cass	R. D. Meridith	Pilger and Fiedler
Coles	L. M. Christen	Vo-Ag Department, Mattoon High School
Cook	W. F. Whiteside	Norman Strassenburg
Cumberland	J. C. Slaton	P. E. Johnson
Douglas	M. D. Bateman	Raymond Owens
DuPage	W. E. Schmidt	Cletus Kocher
Gallatin	E. M. Lutz	Max H. West
Grundy	A. J. Pilch	John Campbell, Gordon Foss
Henderson	J. C. Eisenmayer	Union High School, Dannenbery Brothers
Henry	D. W. Fike	Grant Bretzlaff
Iroquois	K. R. Imig	Robert Roselius
Kankakee	L. D. Graham	James Piper, Lester and Robert Schwark
Knox	D. L. Teel	Wilford Lincoln, William Baird
Lake	R. T. Nicholas	Roy Behm
Livingston	P. T. Wilson	Larry Zabel
Macon	W. F. Myers	Quinter Miller
Madison	W. W. Bundy	Delmar Grotefendt, Bergmann-Taylor Seeds
Mason	S. D. Hawbaker	Charles Roat, Robert Bergman
Massac	R. I. Mowers	Chris Korte
McLean	E. G. Mosbacher	Ora Denny, Parke Kerbaugh
Menard	C. C. Luker	Kenneth Schafer
Monroe	A. H. Obst	Albert Crook
Montgomery	R. F. Long	Lamar Loucks
Morgan	G. A. Trull	James Ranson, Merle Sayre
Moultrie	S. R. Eden	Russel Wiley, Kenneth Riley
Peoria	G. D. Perisho	Verne Schaffner, Dick Heinz
Perry	C. R. Howell	Eugene Pyatt and Sons
Pike	H. S. Wright	Richard Dunker
Randolph	C. E. Willman	Wilbur Florreich
Richland	G. I. Ash	Richard Zwilling
Sangamon	D. C. Corn	John and Charles Beatty
Scott	G. N. Myers	Truman Scott
Shelby	C. H. Cowsert	Shelbyville Extension, Vo-Ag plots
Stark	J. F. Ellis	William McNulty, John Cantwell
Stephenson	C. W. Hoelscher	Thomas Hoeft
Warren	J. G. McCurdy	Armound Olson, Louis Jewell, Don Kirkpatrick
Whiteside	F. A. Tincher	Gordon Belietz, Warren Newman
Williamson	V. N. Smith	Raymond Broeking
Winnebago	R. G. Kerr	James and William Reid, Donald Fellows
Woodford	W. M. Sager	Robert E. Troyer

Test Locations and Soybean Maturity Groups



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